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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,633	07/31/2001	Shunpei Yamazaki	740756-2345	3382
22204 7590 08/03/2010 NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128				
EXAMINER				
TRAN, THIEN F				
ART UNIT		PAPER NUMBER		
2895				
MAIL DATE		DELIVERY MODE		
08/03/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

09/917,633

**Applicant(s)**

YAMAZAKI ET AL.

**Examiner**

Thien F. Tran

**Art Unit**

2895

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6, 14-16, 18-20, 22-24, 26-28 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6, 14-16, 18-20, 22-24, 26-28 and 30-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Upon further consideration, the finality of the rejection of the last Office action is withdrawn.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6, 14-16, 18-20, 22-24, 26-28 and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. (US 5,403,772)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 6, Zhang et al. discloses a transistor (6C) comprising: a channel region (a region between regions 60A); and at least one of a source region (60A) and a drain region (60B) having a first crystalline portion adjacent to the channel region and a second crystalline portion adjacent to the first crystalline portion, wherein the second

crystalline portion (region 55 under nickel island 54 shown in Fig. 6A) is a region where a metal (54) was directly added, and wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion.

Regarding claim 14, Zhang et al. discloses a transistor (Fig. 6C) comprising: a channel region (a region between regions 60A); and at least one of a source region (60A) and a drain region (60A) having a first crystalline portion adjacent to the channel region and a second crystalline portion adjacent to the first crystalline portion, wherein the second crystalline portion (region 55) has a surface through which a metal (54) is added, and wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion.

Regarding claim 15, Zhang et al. discloses a transistor (Fig. 6C) comprising: a channel region (a region between regions 60A); and at least one of a source region (60A) and a drain region (60A) having a first crystalline portion adjacent to the channel region and a second crystalline portion adjacent to the first crystalline portion, wherein the second crystalline portion (region 55) is a region where a metal (54) was directly added, wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion, and wherein a crystal of the first crystalline portion is a crystal which grew in a horizontal direction from the second crystalline portion.

Regarding claim 16, Zhang et al. discloses a transistor (Fig. 6C) comprising: a channel region (a regions between regions 60A); and at least one of a source region (60A) and a drain region (60A) having a first crystalline portion adjacent to the channel region and a second crystalline portion adjacent to the first crystalline portion, wherein

the second crystalline portion (55) has a surface through which a metal (54) is added, and wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion, and wherein a crystal of the first crystalline portion is a crystal which grew in a horizontal direction from the second crystalline portion.

Regarding claims 18, 22, 26 and 30, Zhang et al. further discloses a gate insulating film (57) over the channel region, the first crystalline portion, and the second crystalline portion, wherein the gate insulating film has an opening (62B) overlapping with the second crystalline portion (55).

Regarding claims 19, 20, 23, 24, 27, 28, 31 and 32, the metal (54) is nickel.

Claims 6, 14-16, 18-20, 22-24, 26-28 and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. (US 5,604,360)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 6, Zhang et al. discloses a transistor (Figs. 2D and 3) comprising: a channel region (112); and at least one of a source region (111) and a drain region (113) having a first crystalline portion adjacent to the channel region and a second crystalline portion adjacent to the first crystalline portion, wherein the second crystalline portion (region 100) is a region where a metal (Ni) was directly added, and

wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion.

Regarding claim 14, Zhang et al. discloses a transistor (Figs. 2D and 3) comprising: a channel region (112); and at least one of a source region (111) and a drain region (113) having a first crystalline portion adjacent to the channel region and a second crystalline portion adjacent to the first crystalline portion, wherein the second crystalline portion (region 100) has a surface through which a metal (Ni) is added, and wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion.

Regarding claim 15, Zhang et al. discloses a transistor (Figs. 2D and 3) comprising: a channel region (112); and at least one of a source region (111) and a drain region (113) having a first crystalline portion adjacent to the channel region and a second crystalline portion adjacent to the first crystalline portion, wherein the second crystalline portion (region 100) is a region where a metal (Ni) was directly added, wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion, and wherein a crystal of the first crystalline portion is a crystal which grew in a horizontal direction from the second crystalline portion.

Regarding claim 16, Zhang et al. discloses a transistor (Figs. 2D and 3) comprising: a channel region (112); and at least one of a source region and a drain region (113) having a first crystalline portion adjacent to the channel region (112) and a second crystalline portion adjacent to the first crystalline portion, wherein the second crystalline portion (region 100) has a surface through which a metal (Ni) is added, and

wherein the first crystalline portion is a region where crystallization advanced from the second crystalline portion, and wherein a crystal of the first crystalline portion is a crystal which grew in a horizontal direction from the second crystalline portion.

Regarding claims 18, 22, 26 and 30, Zhang et al. further discloses a gate insulating film (106) over the channel region, the first crystalline portion, and the second crystalline portion, wherein the gate insulating film has an opening (120) overlapping with the second crystalline portion (100).

Regarding claims 19, 20, 23, 24, 27, 28, 31 and 32, the metal is nickel.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien F. Tran whose telephone number is (571) 272-1665. The examiner can normally be reached on 7:30AM - 4:00PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew N. Richards can be reached on (571) 272-1736. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thien F Tran/

Primary Examiner, Art Unit 2895

/N. Drew Richards/

Supervisory Patent Examiner, Art Unit 2895